Please amend the above referenced application as follows:

In the Claims:

1-50. (Canceled)

51. (Currently Amended) A method of performing computed assisted diagnosis of a region of interest, comprising:

acquiring imaging scan data including at least a portion of the region of interest;

converting the imaging scan data to a volume representation including a plurality
of voxels, at least a portion of the voxels representing a surface of the region of interest; and
analyzing said portion of voxels representing a surface for at least one of a

geometric feature and a textural feature indicative of an abnormality.

- 52. (Original) The method of performing computed assisted diagnosis according to claim 51, wherein the textural feature is included in a probability density function characterizing a correlation between two voxels of the portion of voxels.
- 53. (Original) The method of performing computed assisted diagnosis according to claim 52, wherein the two voxels are adjacent voxels.
- 54. (Original) The method of performing computer assisted diagnosis according to claim 52, wherein intensities of said portion of voxels are used to generate an estimate of the probability density function.

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- 55. (Original) The method of performing computer assisted diagnosis according to claim 54, wherein a plurality of voxel intensities are used to generate a cumulating distribution function of the region of interest and a local cumulating distribution function, and wherein the local cumulating distribution function is compared against the context cumulating distribution function to identify regions of abnormality.
- 56. (Original) The method of performing computer assisted diagnosis according to claim 55, wherein a distance is determined between said local cumulating distribution function and said context cumulating distribution function, the distance providing a measure of abnormality.
- 57. (Original) The method of performing computer assisted diagnosis according to claim 56, wherein the distance is used to assign intensity values to the voxels representing a surface of the region of interest and wherein said method further comprises displaying said voxels such that variations in intensity represent regions of abnormality.
- 58. (Original) The method of performing computer assisted diagnosis according to claim 57, wherein the region of interest includes the colon and wherein the abnormality includes polyps.
- 59. (Original) The method of performing computer assisted diagnosis according to claim 51, wherein the region of interest includes the aorta and wherein the abnormality includes abdominal aortic aneurysms.

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60-61 (Canceled)

62. (New) A method of performing computed assisted diagnosis of a region of interest, comprising:

acquiring imaging scan data including at least a portion of the region of interest; converting the imaging scan data to a volume representation including a plurality of voxels, at least a portion of the voxels representing a surface of the region of interest; and analyzing said portion of voxels representing a surface for a geometric feature and a textural feature indicative of an abnormality.

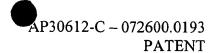
- 63. (New) The method of performing computed assisted diagnosis according to claim 62, wherein the textural feature is included in a probability density function characterizing a correlation between two voxels of the portion of voxels.
- 64. (New) The method of performing computed assisted diagnosis according to claim 63, wherein the two voxels are adjacent voxels.
- 65. (New) The method of performing computer assisted diagnosis according to claim 61, wherein intensities of said portion of voxels are used to generate an estimate of the probability density function.
- 66. (New) The method of performing computer assisted diagnosis according to claim 65, wherein a plurality of voxel intensities are used to generate a cumulating distribution function of the region of interest and a local cumulating distribution function, and wherein the

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local cumulating distribution function is compared against the context cumulating distribution function to identify regions of abnormality.

- 67. (New) The method of performing computer assisted diagnosis according to claim 66, wherein a distance is determined between said local cumulating distribution function and said context cumulating distribution function, the distance providing a measure of abnormality.
- 68. (New) The method of performing computer assisted diagnosis according to claim 67, wherein the distance is used to assign intensity values to the voxels representing a surface of the region of interest and wherein said method further comprises displaying said voxels such that variations in intensity represent regions of abnormality.
- 69. (New) The method of performing computer assisted diagnosis according to claim 68, wherein the region of interest includes the colon and wherein the abnormality includes polyps.
- 70. (New) The method of performing computer assisted diagnosis according to claim 62, wherein the region of interest includes the aorta and wherein the abnormality includes abdominal aortic aneurysms.
- 71. (New) The method of performing computer assisted diagnosis according to claim 62, wherein the surface is represented as a second differentiable surface where each surface

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volume unit has an associate Gauss curvature and wherein said Gauss curvatures combine to form said geometric features.

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72. (New) The method of performing computer assisted diagnosis according to claim 62, wherein a plurality of predetermined geometrical feature templates are defined and wherein the geometric features of said surface are compared to said templates to determine a geometric feature classification.

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